

What is claimed is:

1. A water-thin emulsion comprising a non-phospholipid, non-ethoxylated pseudoemulsifier system, the system having a chemical composition with at least one hydrophobic moiety and at least one polar moiety, the size, shape and/or planar arrangement of the hydrophobic and polar moieties being asymmetrical with respect to each other.

2. The emulsion of claim 1 in which the system is a single compound having at least two hydrophobic moieties, at least two polar moieties, or at least two of both hydrophobic and polar moieties.

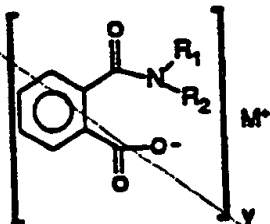
3. The emulsion of claim 1 in which the system is a mixture of compounds comprising at least two hydrophobic moieties, at least two polar moieties, or at least two of both hydrophobic and polar moieties.

4. The emulsion of claim 1 which is substantially free of phospholipid and ethoxylated emulsifiers.

5. The emulsion of claim 1 which contains no more than 2% by weight of the pseudoemulsifier.

6. The emulsion of claim 1 which contains no more than 1% of the pseudoemulsifier.

7. The emulsion of claim 1 in which the pseudoemulsifier is a 2-amidocarbonyl-benzoic acid compound having the formula (I)



Sub A2
wherein R_1 and R_2 are independently H or $(CH_2)_nCH_3$, wherein $n=8-22$, provided that at least one of R_1 and R_2 is H, wherein M^+ is a cation selected from the group consisting of H, Na, K, NH_4 and derivatives thereof (for example, basic amino acids), Ba, Ca, Mg, Al, Ti, and Zr, and y is an integer of a value satisfying the valency of M^+ .
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8. The emulsion of claim 7 in which the pseudoemulsifier is a monovalent salt of stearyl amidobenzoic acid.

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9. The emulsion of claim 1 in which the pseudoemulsifier is surfactin. 100 Ester 5264303

10. The emulsion of claim 1 in which the system also comprises a polymer.

11. The emulsion of claim 10 in which the polymer comprises dispersed hydrophilic moieties.

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12. The emulsion of claim 11 in which the polymer is selected from the group consisting of disaccharides, polysaccharides, or a predominantly hydrophilic peptide or protein. 22
xanthan

13. The emulsion of claim 3 in which the system comprises at least one compound selected from the group consisting of glycerol esters, sucrose esters and glucose esters.

14. The emulsion of claim 13 in which the system comprises both a glycerol ester and a sucrose or glucose ester.

15. The emulsion of claim 14 in which the system also comprises a polymer.

16. The emulsion of claim 15 in which the polymer is selected from the group consisting of disaccharides, polysaccharides and predominantly hydrophilic proteins or peptides. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

17. The emulsion of claim 3 in which the system comprises xanthan, 06510 1000 SUB B37 17 See Spec 106-9

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Versapaper"
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polyglucomannan, a high HLB emulsifier, and a low HLB emulsifier.

18. The emulsion of claim 13 in which the system comprises xanthan, polyglucomannan, a high HLB emulsifier, and a low HLB emulsifier.

19. A water-thin oil-in-water emulsion comprising a non-phospholipid, non-ethoxylated pseudoemulsifier system, the system having a chemical composition with at least two hydrophobic moieties, at least two polar moieties, or at least two of both hydrophobic and polar moieties, the size, shape and/or planar arrangement of the hydrophobic and polar moieties being asymmetrical with respect to each other, each polar moiety being of a different size or shape than the other polar moiety if present, and each hydrophobic moiety being of different size or shape than the other if present.

20. The emulsion of claim 19 in which the hydrophobic moieties are of different chain lengths.

21. The emulsion of claim 19 in which at least one of the moieties has a closed ring structure.

22. The emulsion of claim 19 in which at least one of the moieties is a long straight-chain moiety.

23. The emulsion of claim 19 in which at least one of the moieties has a closed ring structure, and one of the moieties is a long, straight chain moiety.

24. The emulsion of claim 23 in which the system comprises a hydrophobic closed ring structure, and a long chain hydrophobe, separated from each other by a hydrophilic moiety.

25. The emulsion of claim 24 in which the hydrophilic moiety is selected from the group consisting of hydroxyl, amide, ester, or carboxyl moieties, hydrocarbons chains substituted with hydroxyl, amide, ester, or carboxyl moieties, and combinations thereof.

26. The emulsion of claim 23 in which the system comprises a

hydrophilic closed ring structure, at least one carboxyl moiety, and a long chain fatty acid moiety.

27. The emulsion of claim 19 in which the emulsifier system comprises more than one compound.

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28.
27. The emulsion of claim 27 in which at least one of the compounds comprises a long, straight-chain hydrocarbon moiety.

29. The emulsion of claim 28 in which at least one of the compounds comprises a hydrophilic moiety selected from the group consisting of hydroxyl, amide, ester, or carboxyl moieties, hydrocarbons chains substituted with hydroxyl, amide, ester, or carboxyl moieties, and combinations thereof.

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30. The emulsion of claim 29 in which the system further comprises a polymer selected from the group consisting of disaccharides, polysaccharides, and predominantly hydrophilic proteins or peptides.

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process
31. A water-thin oil-in-water emulsion prepared by processing the combined oil and water phases comprising a non-phospholipid, non-ethoxylated pseudoemulsifier system, the system having a chemical composition with at least one hydrophobic moiety and at least one polar moiety, the size, shape and/or planar arrangement of the hydrophobic and polar moieties being asymmetrical with respect to each other, through a high pressure homogenizer at a pressure of at least about 15,000 psi.

45-
polymer
2-iso-octanol
OR
micro-encapsulated
32. The emulsion of claim 31 in which the system is a single compound having at least two hydrophobic moieties, at least two polar moieties, or at least two of both hydrophobic and polar moieties.

33. The emulsion of claim 31 in which the system is a mixture of compounds comprising at least two hydrophobic moieties, at least two polar moieties, or at least two of both hydrophobic and polar moieties.

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34. A multiple emulsion comprising the emulsion of claim 1.

35. A multiple emulsion incorporating the emulsion of claim 6.

36. A multiple emulsion incorporating the emulsion of claim 19.

37. A multiple emulsion incorporating the emulsion of claim 27.

38. The emulsion of claim 33 that comprises no greater than 1% of traditional emulsifier.

39. The emulsion of claim 35 that comprises no greater than 1% of traditional emulsifier.

40. The emulsion of claim 36 that comprises no greater than 1% of traditional emulsifier.

41. The emulsion of claim 37 that comprises no greater than 1% of traditional emulsifier.

42. A multiple emulsion prepared by combining a water-in-oil emulsion with the emulsion of claim 1, and mixing to substantial homogeneity.

43. A method of making a water-thin, oil-in-water emulsion comprising processing the combined oil and water phases comprising a non-phospholipid, non-ethoxylated pseudoemulsifier system, the system having a chemical composition with at least one hydrophobic moiety and, at least one polar moiety, the size, shape and/or planar arrangement of the hydrophobic and polar moieties being asymmetrical with respect to each other, through a high pressure homogenizer at a pressure of at least about 15,000 psi.